

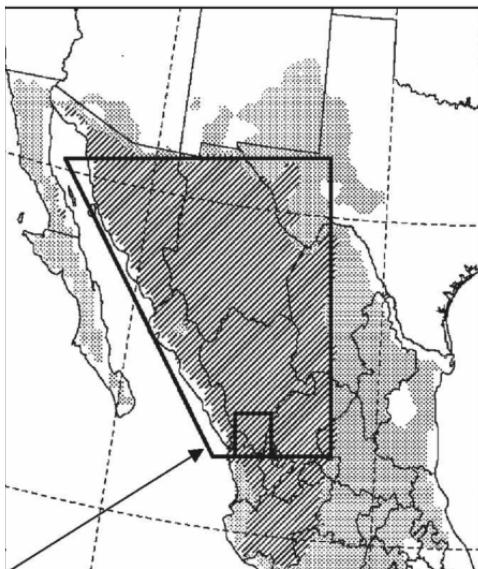


REPRESENTATION OF THE INTRA-AMERICAS SEA AND NORTH AMERICAN MONSOON IN CMIP5 HISTORICAL AND RCP 4.5 MODEL SIMULATIONS

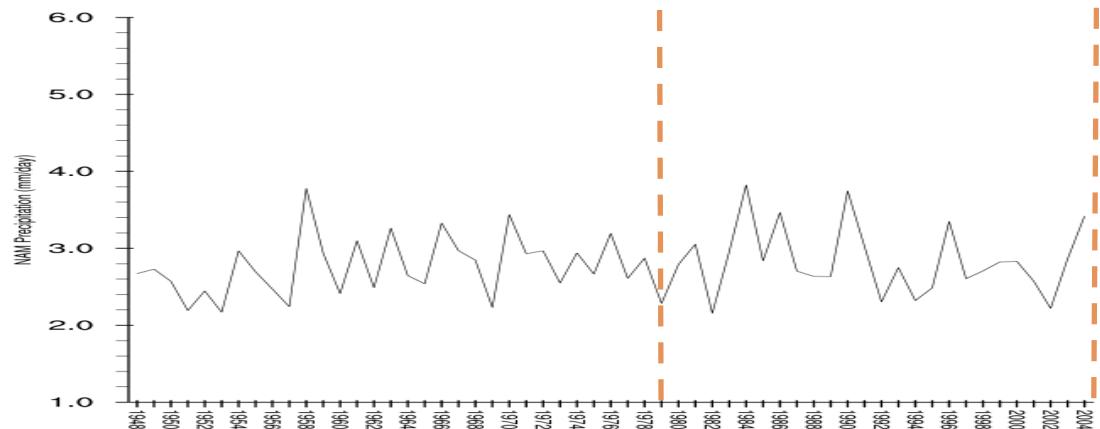
Yolande Serra and Kerrie Geil
University of Arizona

MAPP Webinar Series “Evaluation of CMIP5 Model Experiments”, May 2, 2012

Analysis Region and Observational Data



P-NOAA



Higgins et al. (2000)

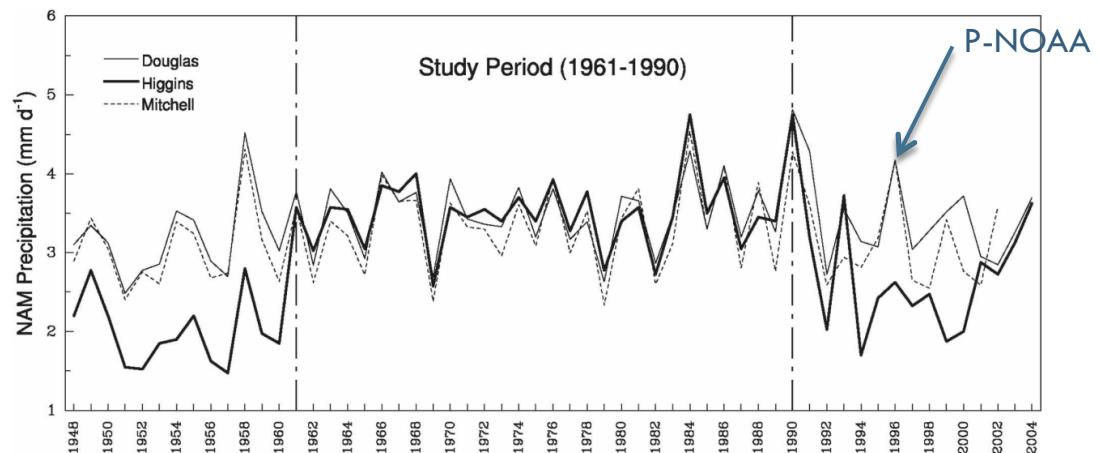
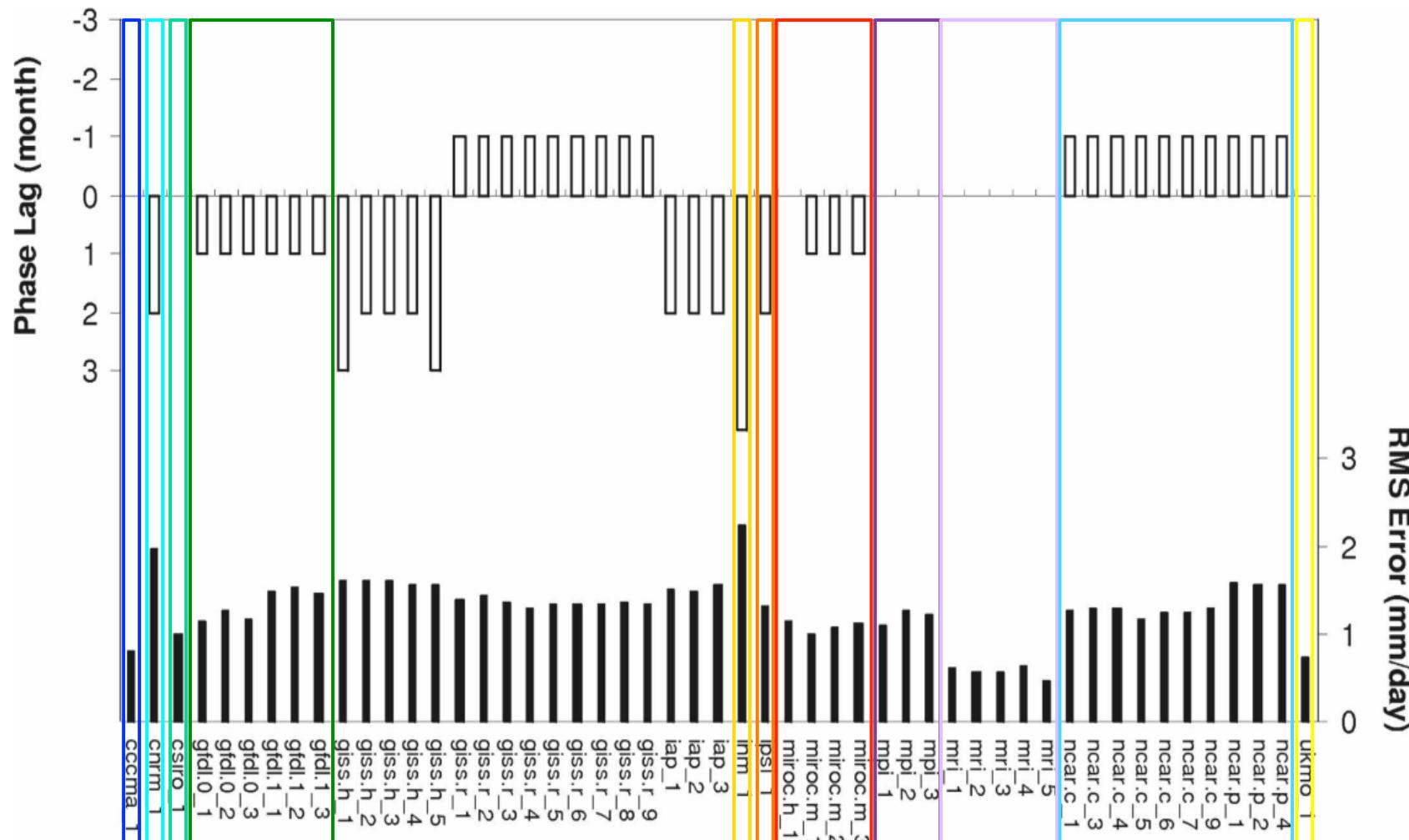


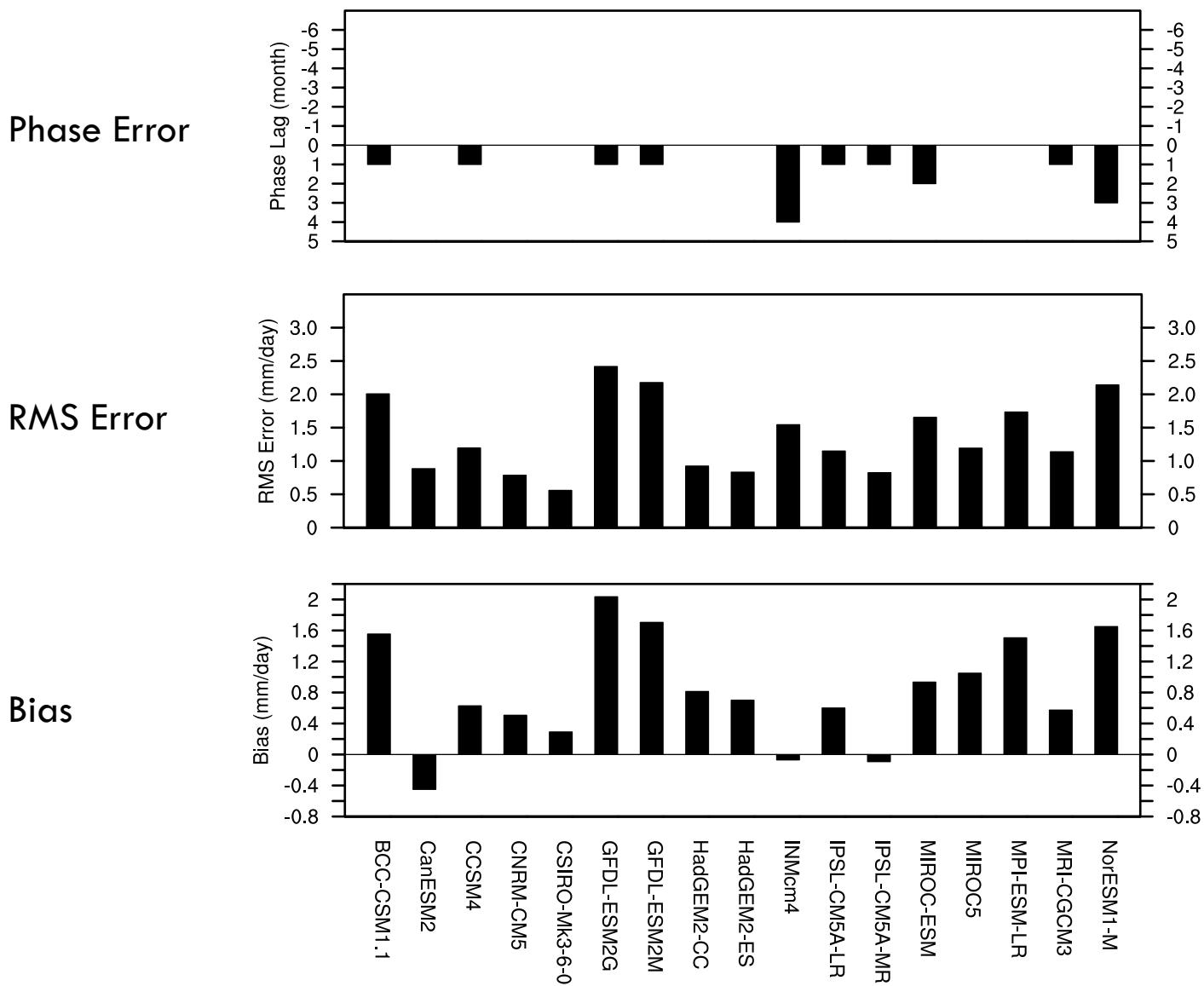
FIG. 2. Interannual variations during 1948–2004 of the seasonal (June–September) mean precipitation (mm day^{-1}) averaged over the NAM core region from three datasets.

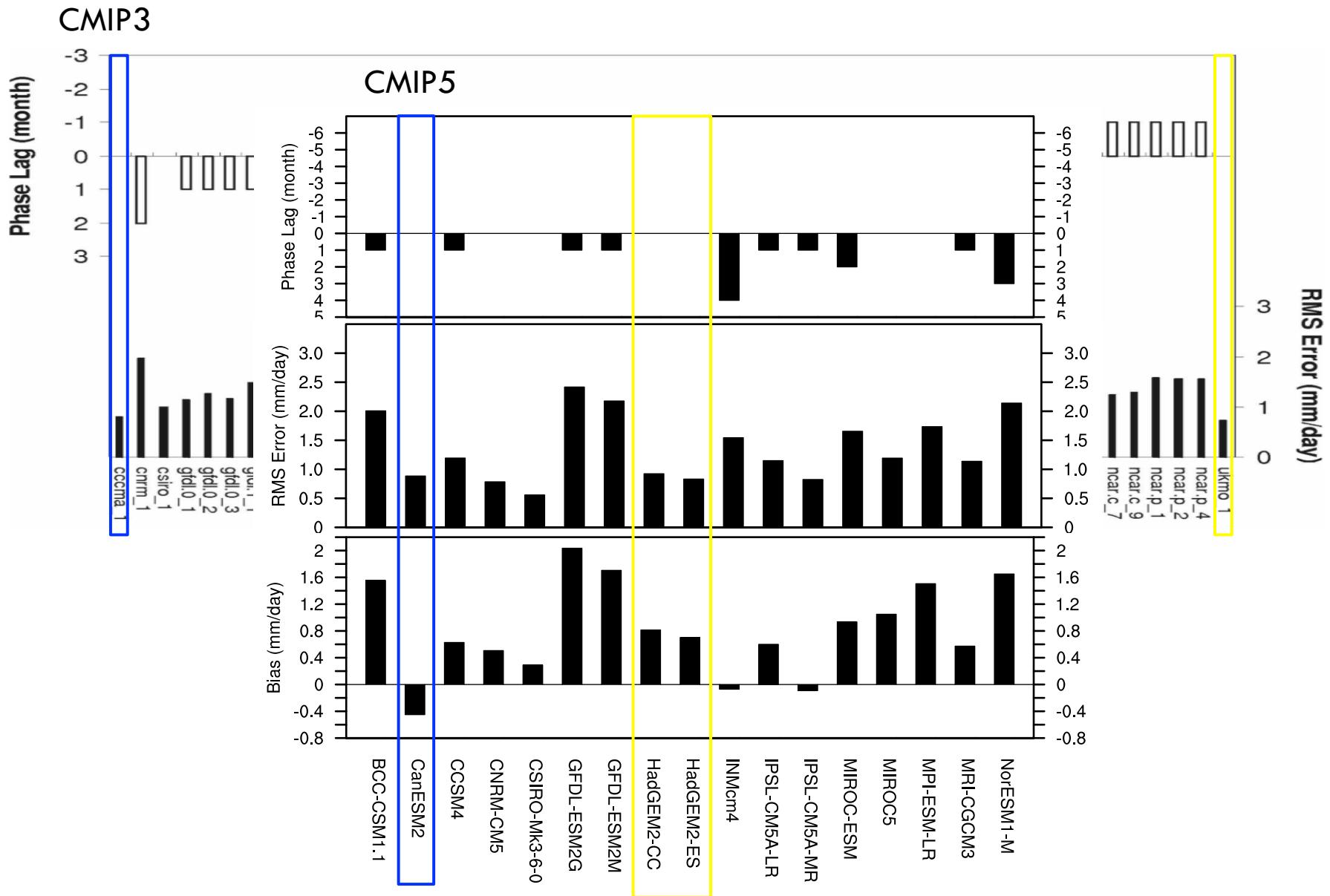
CMIP3 Historical (1961-1990) Period



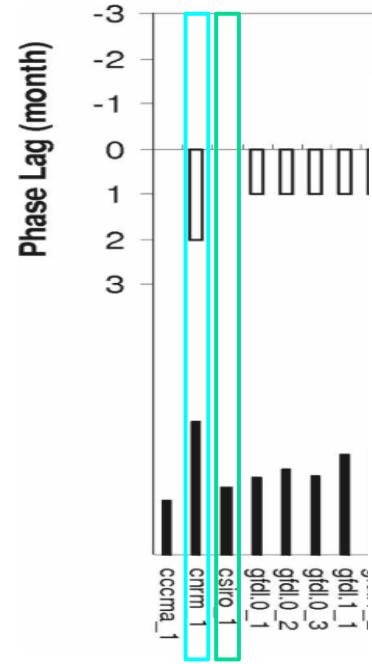
Liang et al. (JCLIM, 2008)

CMIP5 Historical (1979-2005) Period

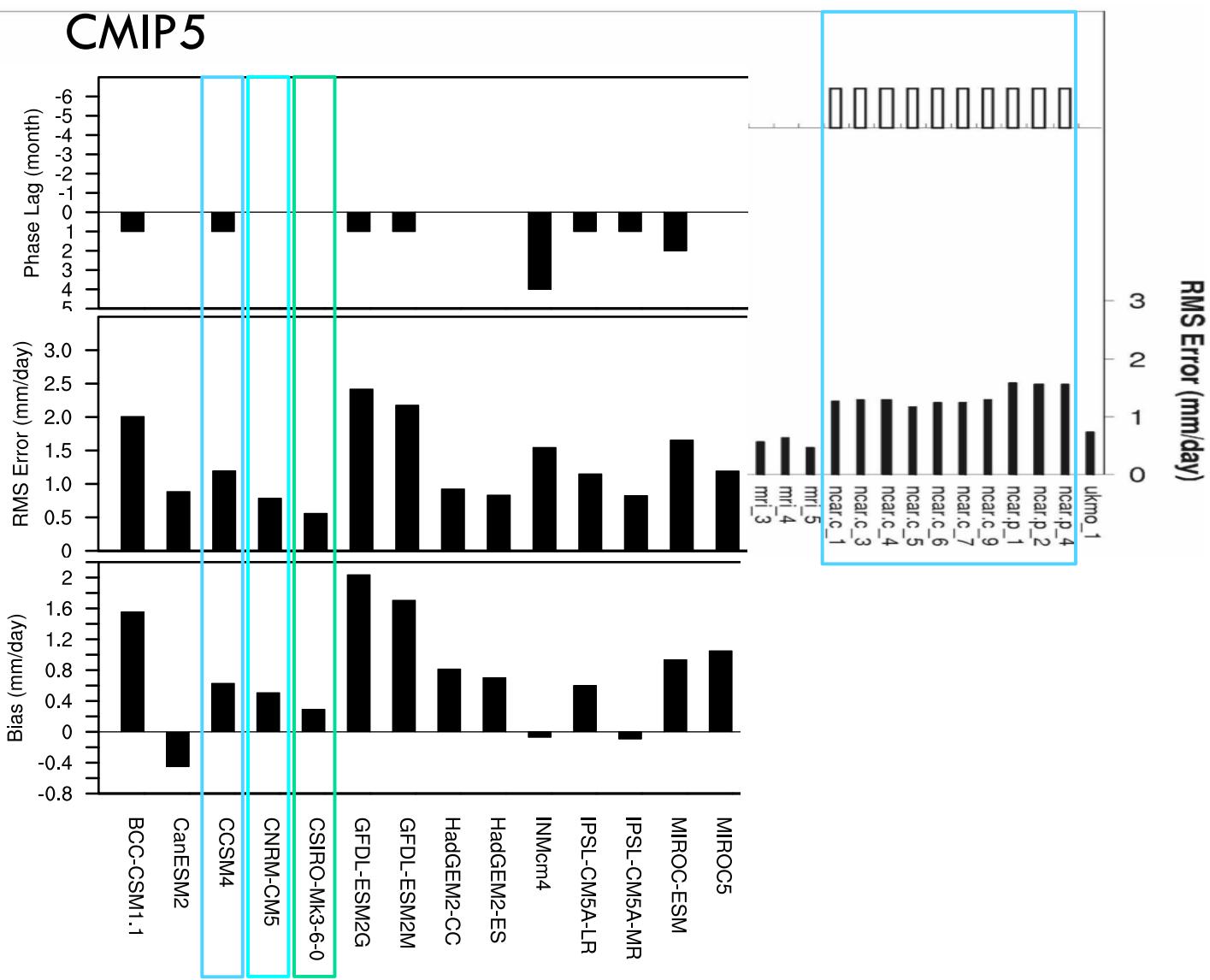




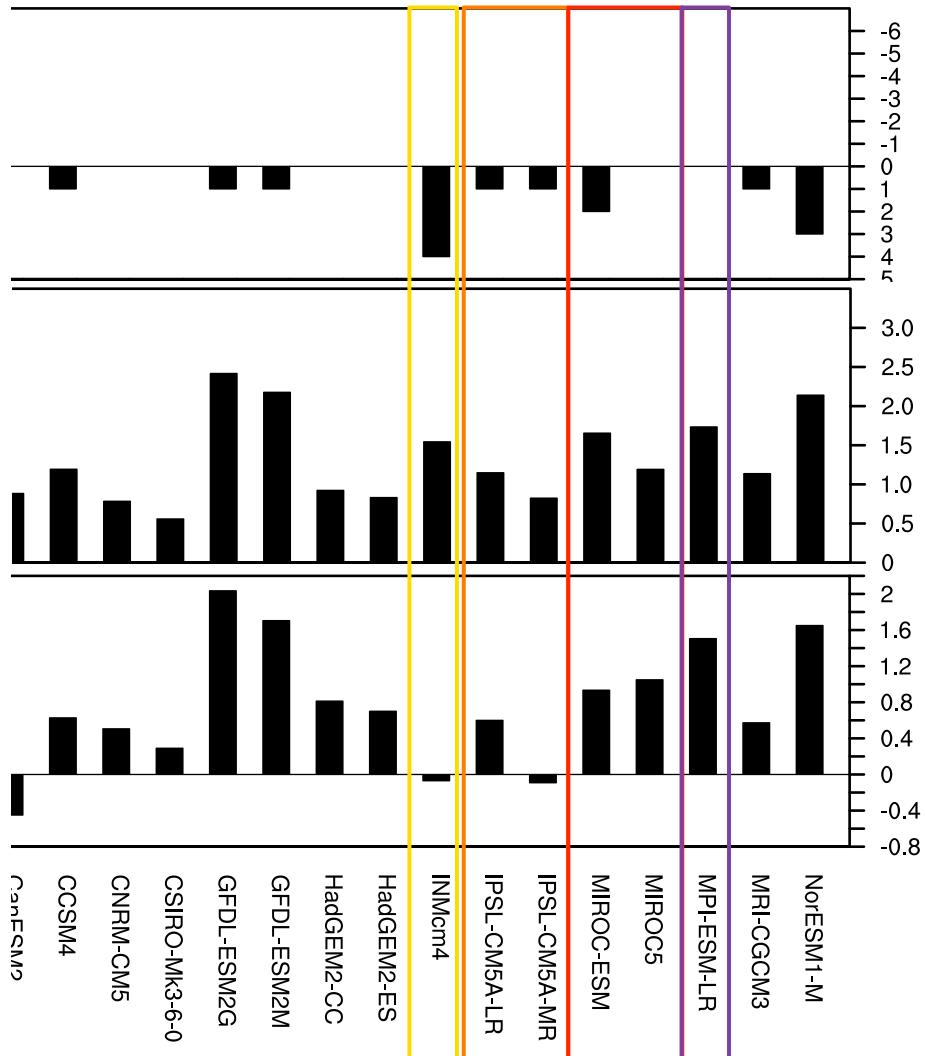
CMIP3



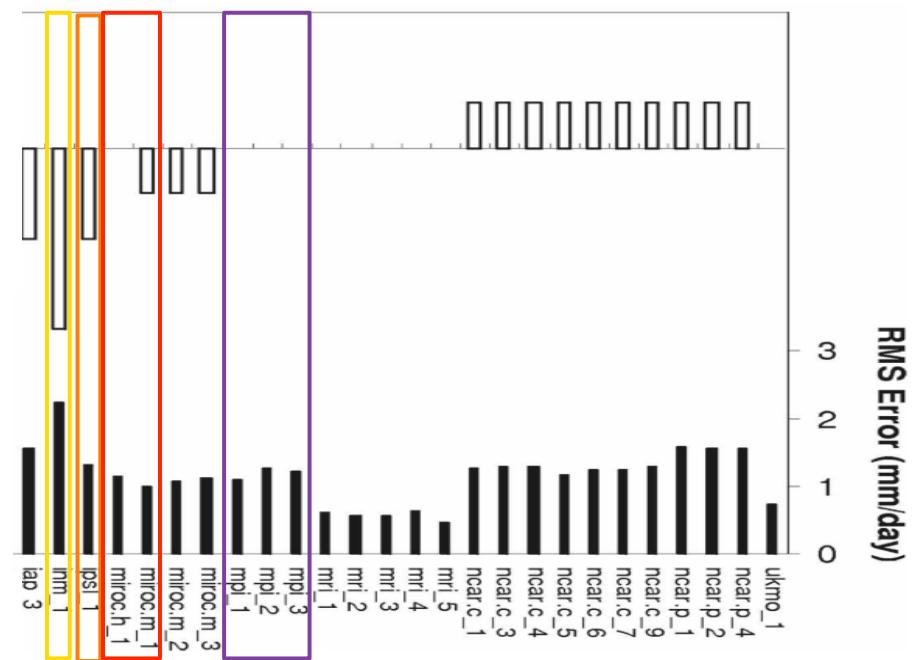
CMIP5



CMIP5

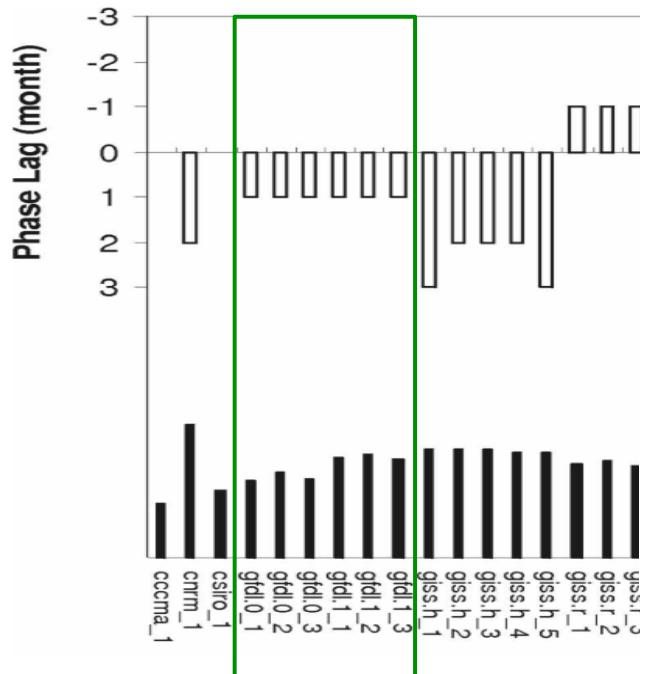


CMIP3

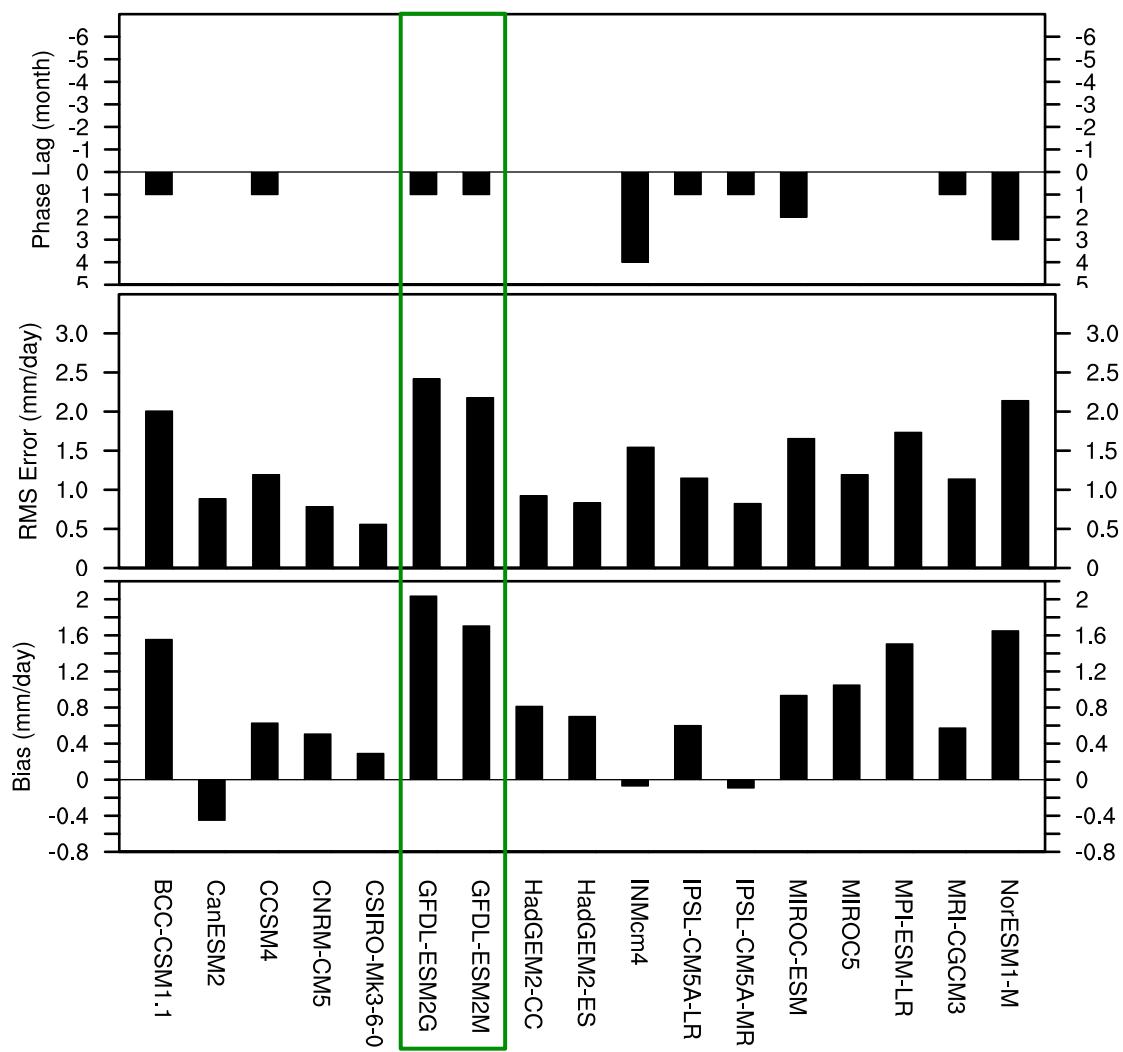


RMS Error (mm/day)

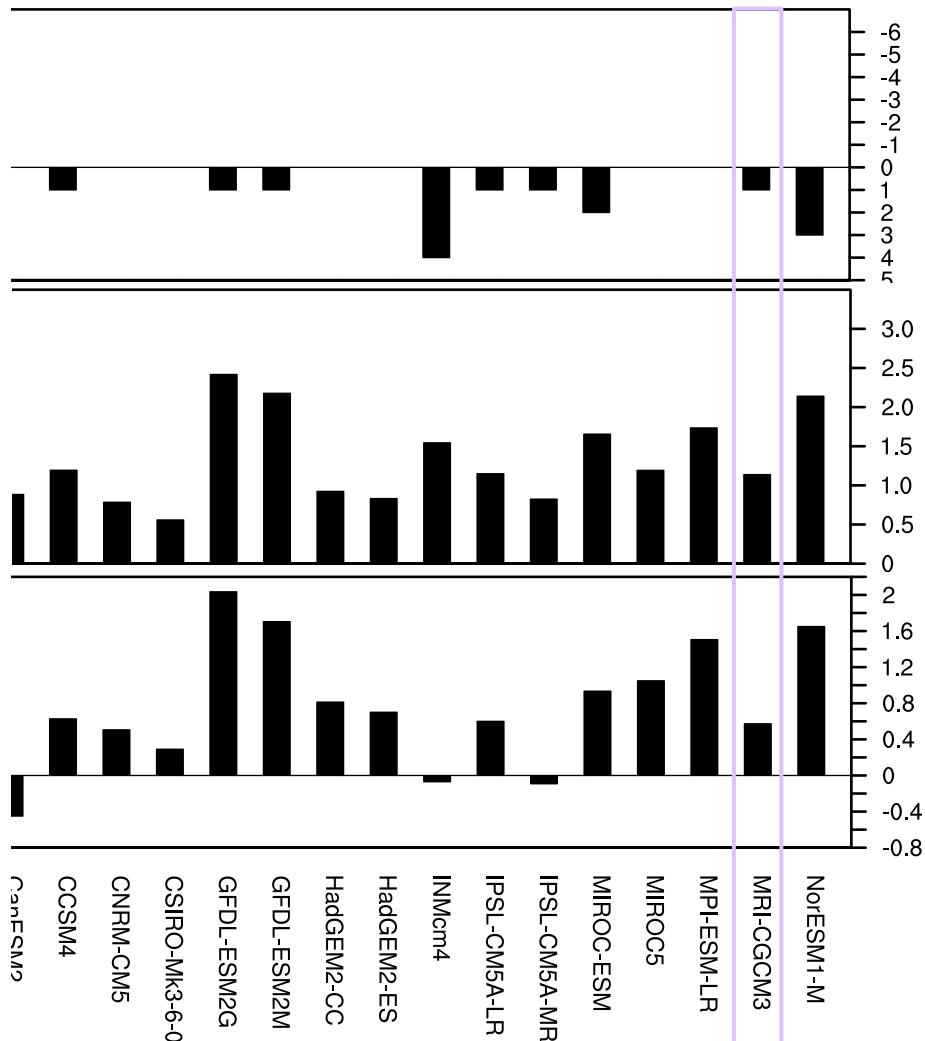
CMIP3



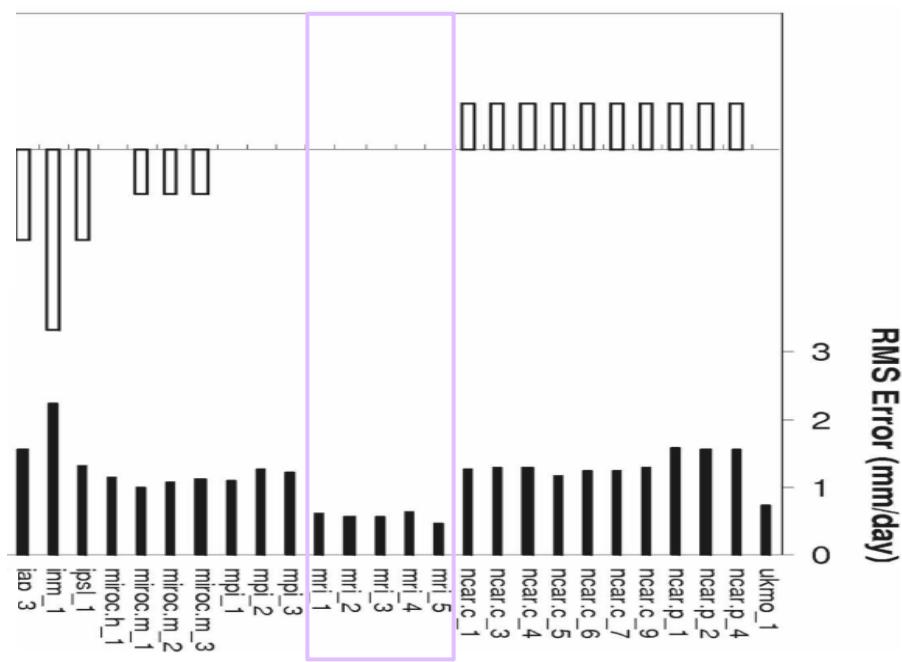
CMIP5



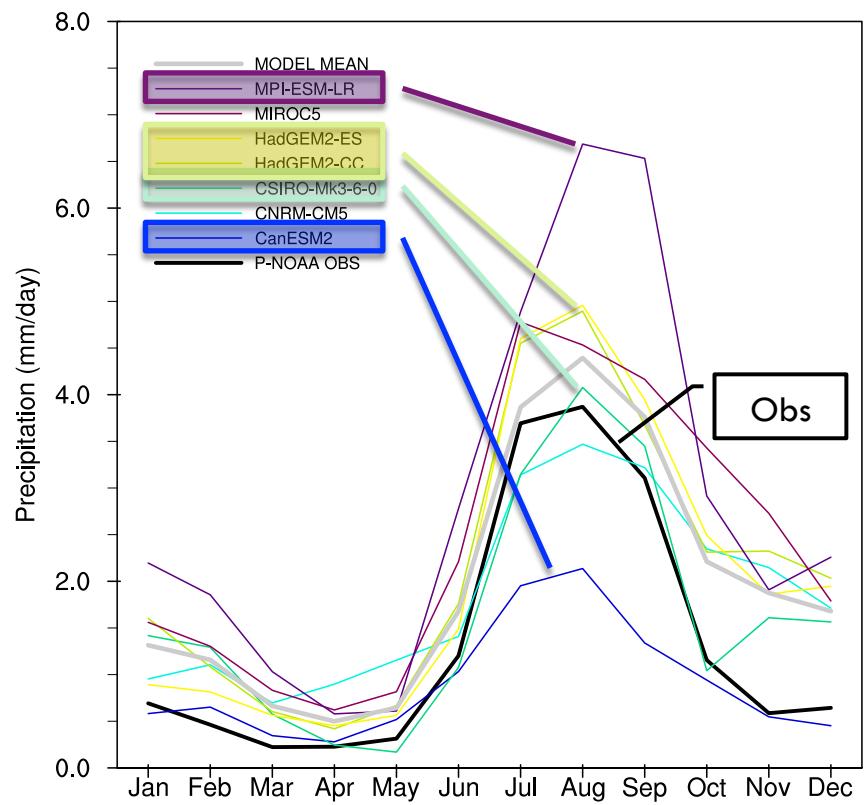
CMIP5



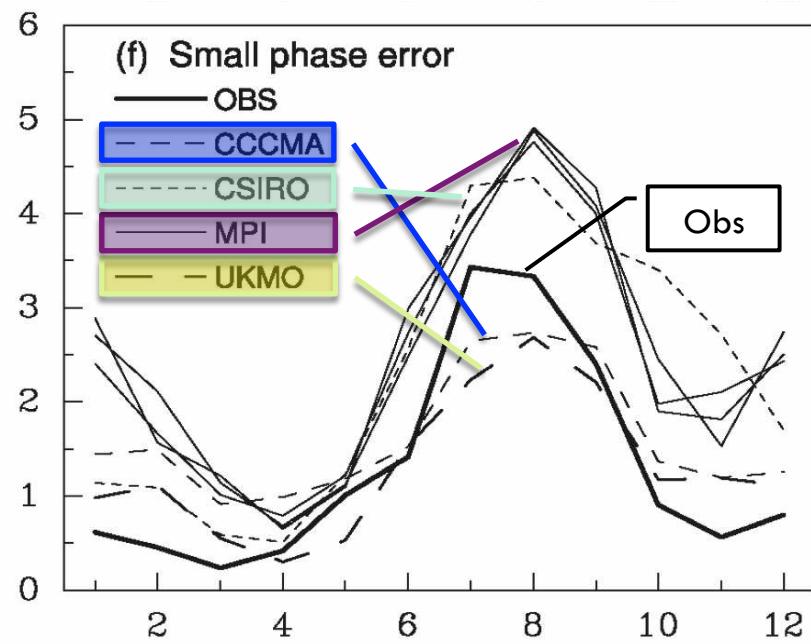
CMIP3



CMIP5 Small Phase Error Models

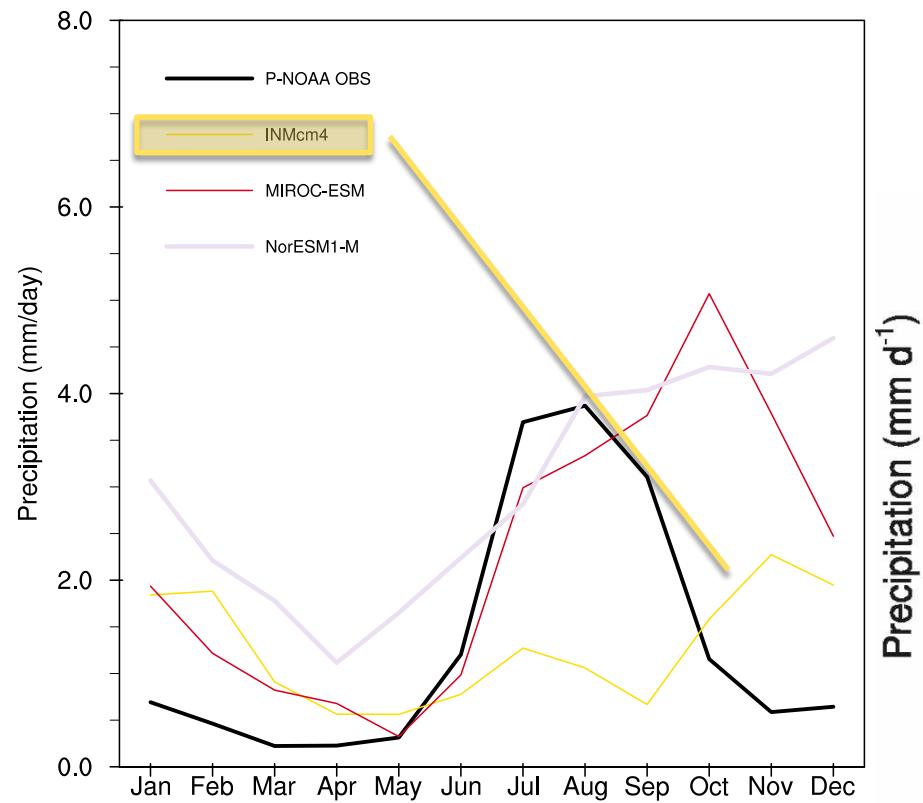


CMIP3 Small Phase Error Models

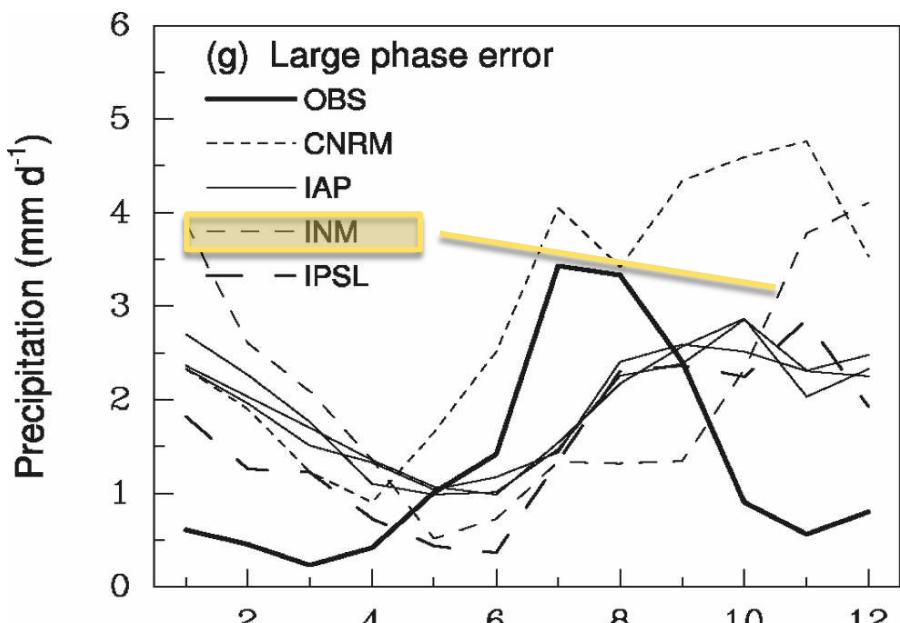


Liang et al. (JCLIM, 2008)

CMIP5 Large Phase Error

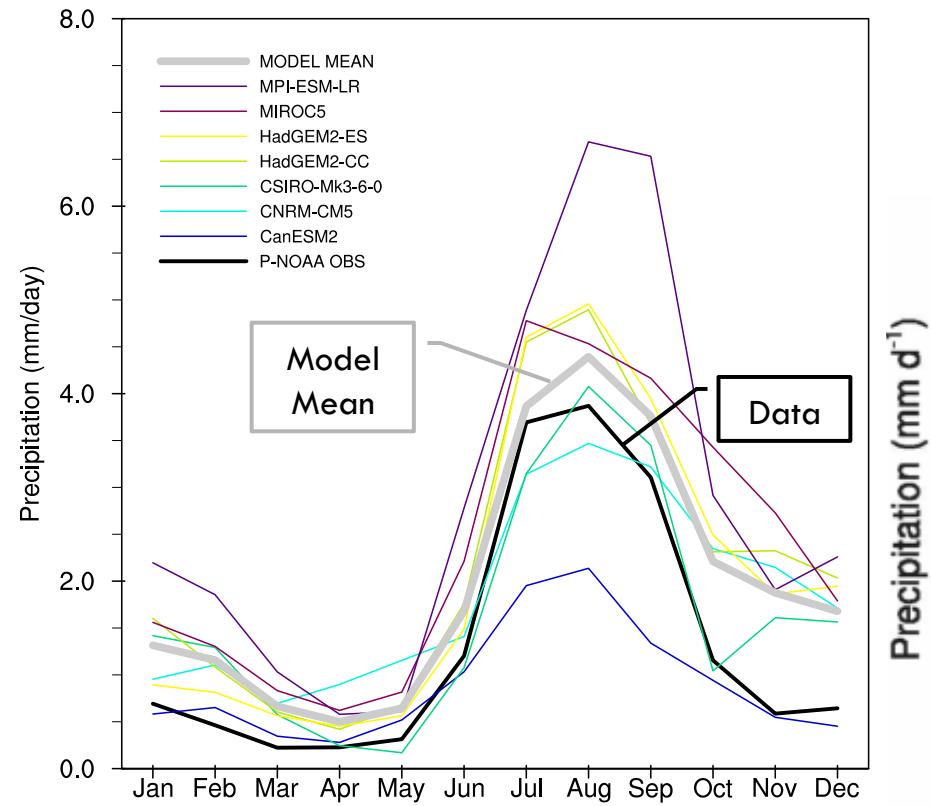


CMIP3 Large Phase Error

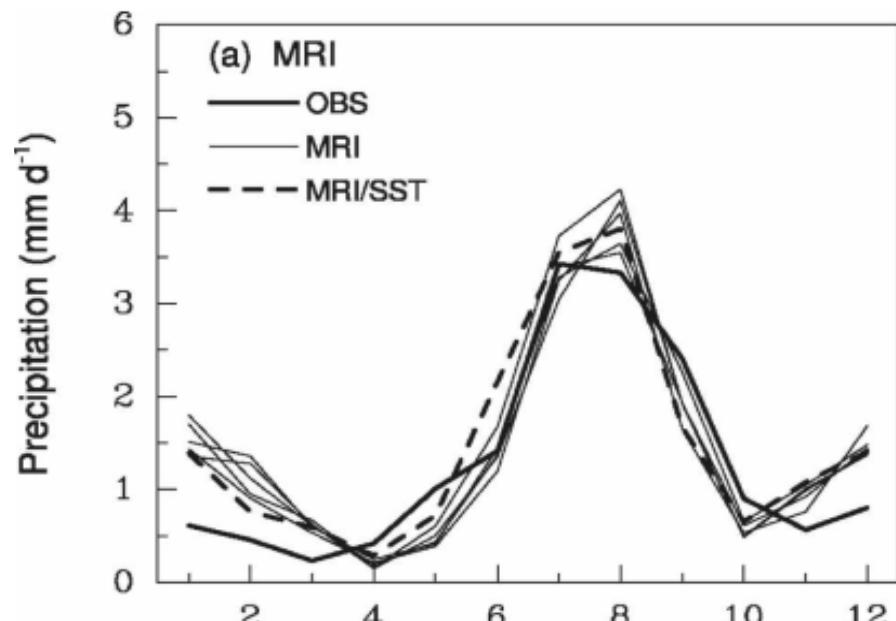


Liang et al. (JCLIM, 2008)

CMIP5 Small Phase Error Models

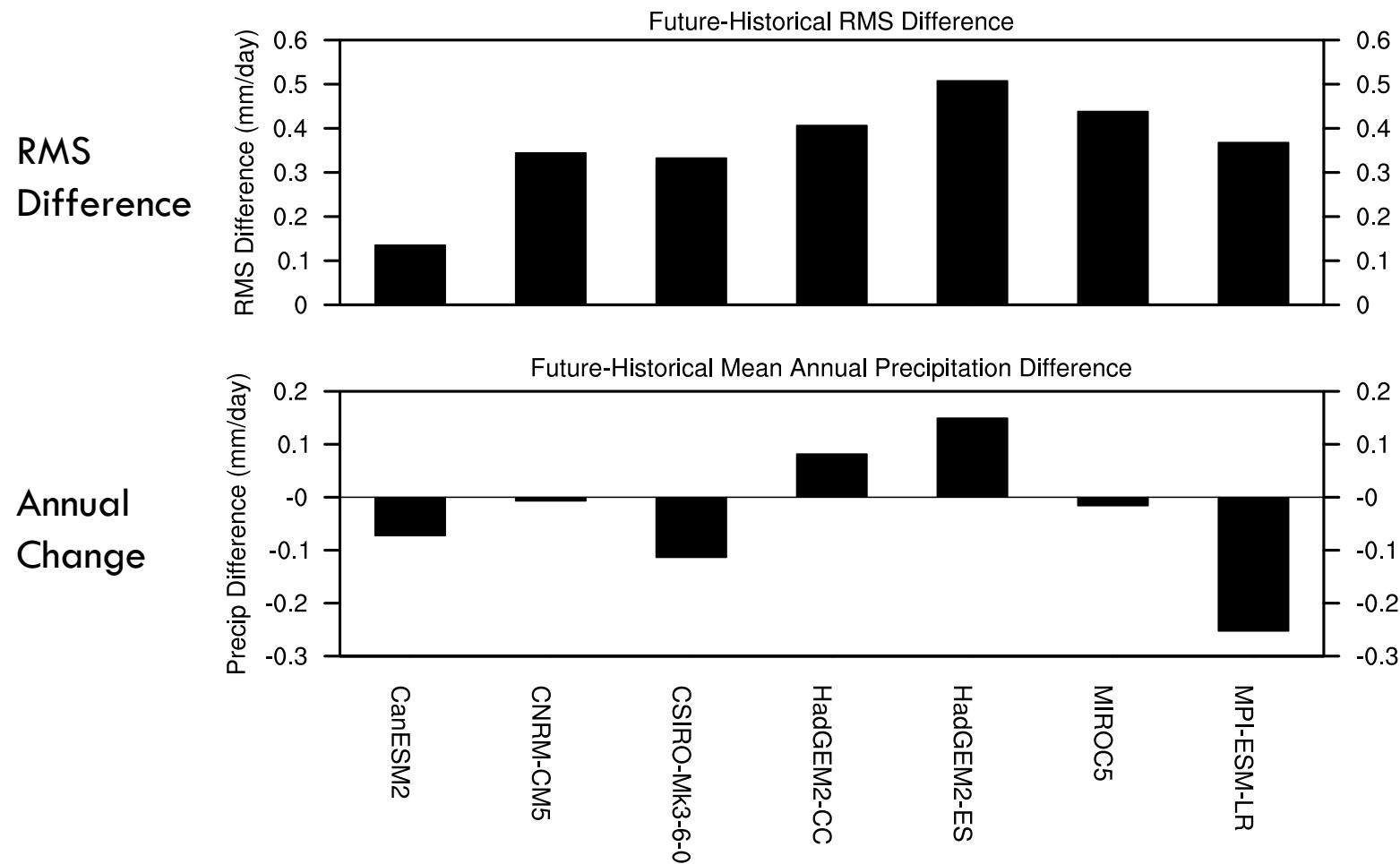


CMIP3 MRI Ensembles

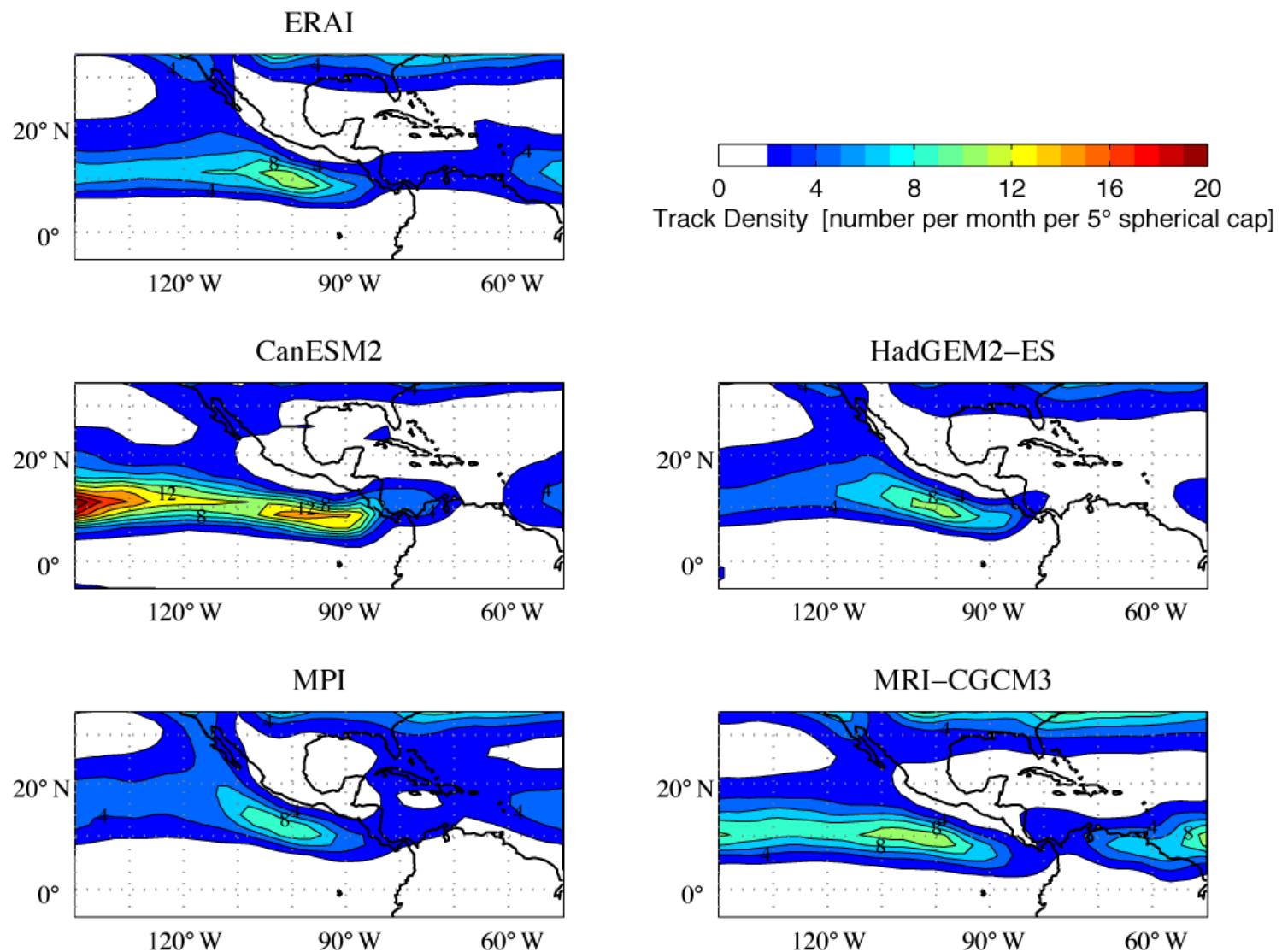


Liang et al. (JCLIM, 2008)

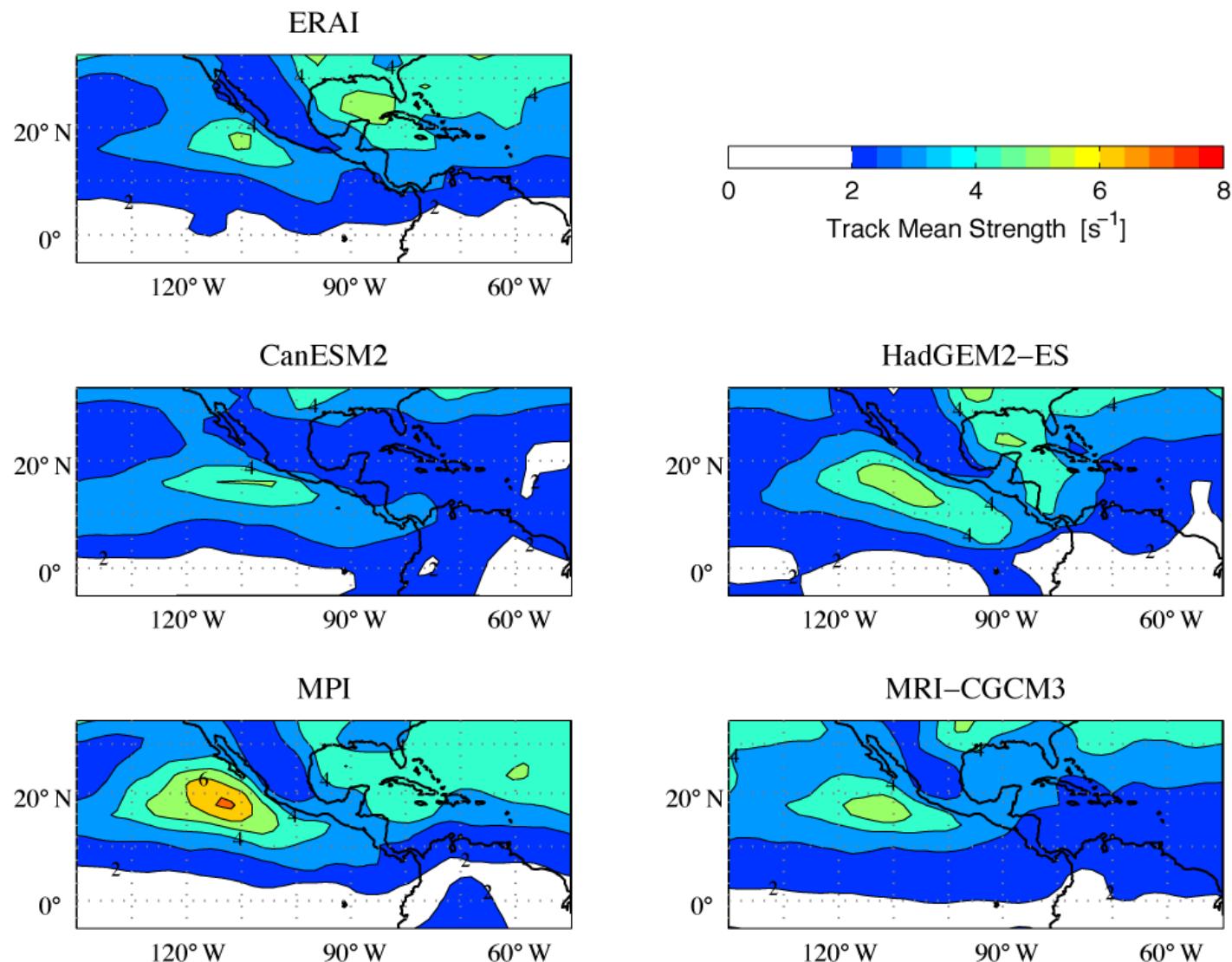
CMIP5 Future (2070-2090) – Historical (1979-2005)



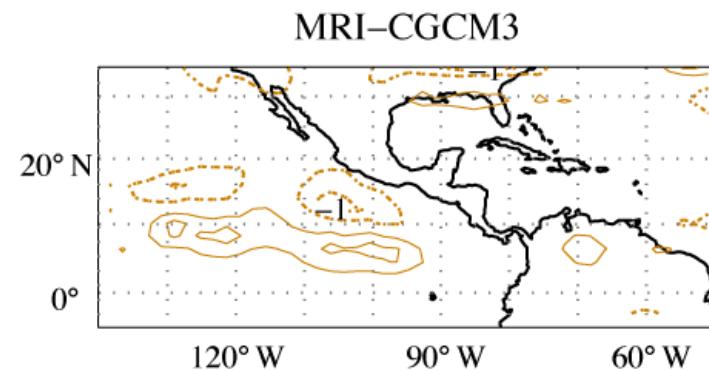
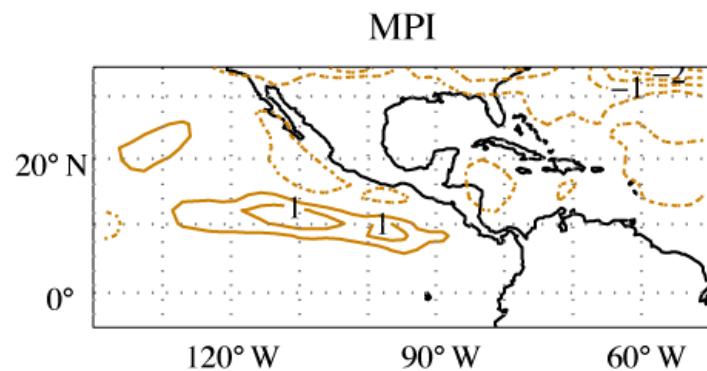
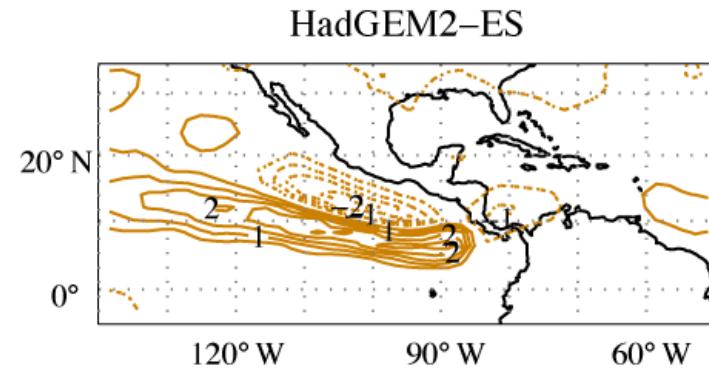
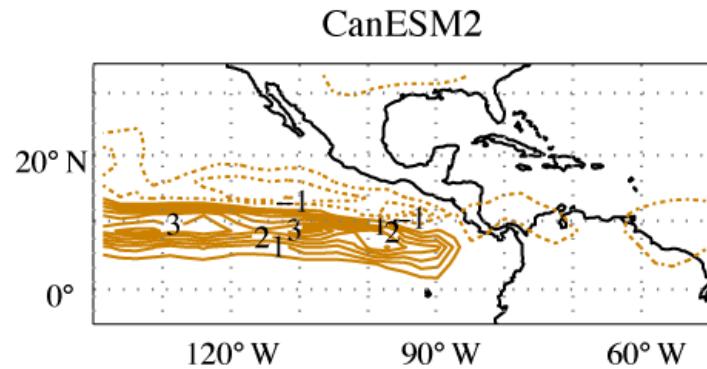
CMIP5 Historical (1979-2005)



CMIP5 Historical (1979-2005)



CMIP5 Future (2070-2090) – Historical (1979-2005)



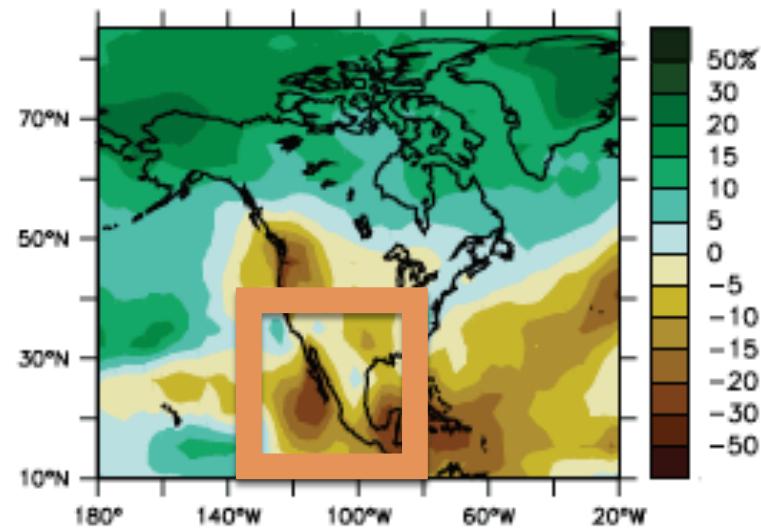


A world map showing land cover and vegetation types. The map uses a color-coded legend where green represents forest, yellow/orange represents shrubland or grassland, and grey represents water bodies. A large area of purple is overlaid across the continents, particularly in North America, South America, and Australia. This purple area covers most of the landmasses except for the polar regions and some coastal areas.

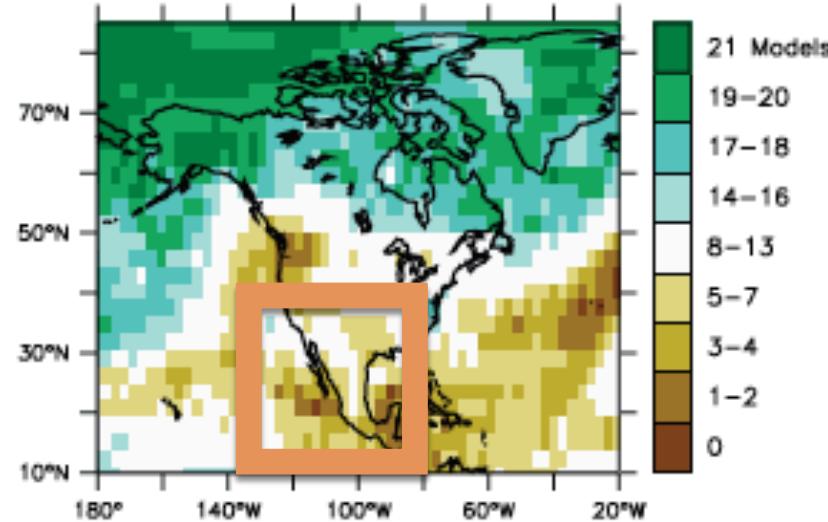
Thank You!

CMIP3 JJA Precipitation

% Change in
Precipitation

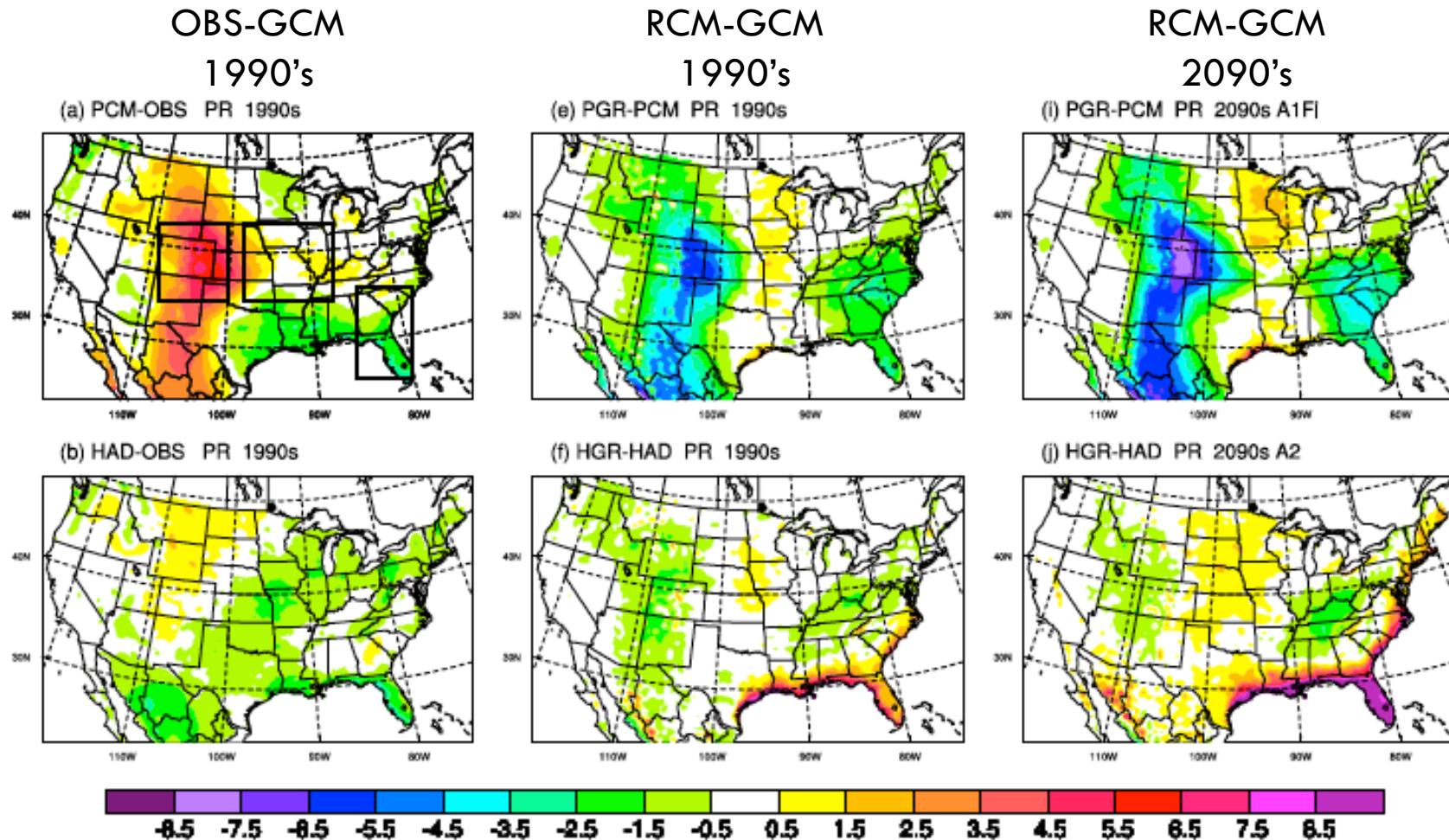


Number of
Models > 0



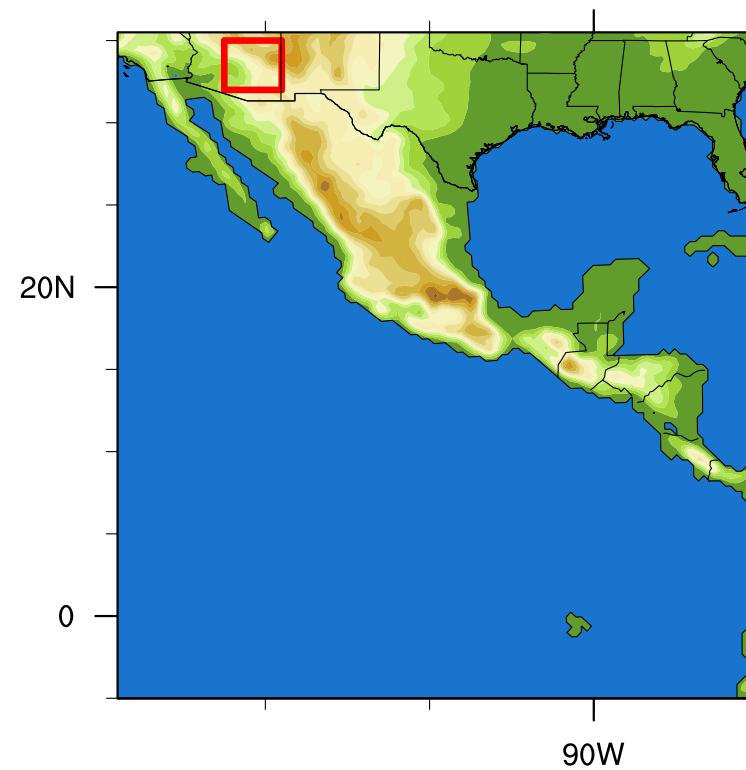
Christensen et al. (AR4, 2007)

Dynamical Downscaling of CMIP3 and Model Bias

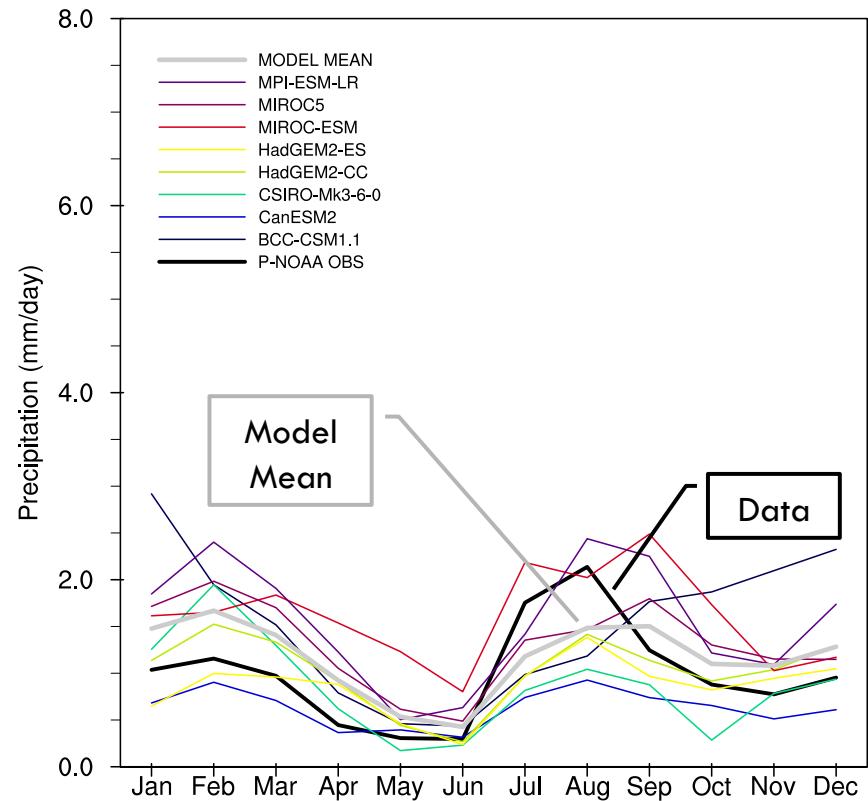


Liang et al. (GRL, 2008)

NAM AZ Region



Small Phase Error: 1979-2005



Moderate Phase Error: 1979-2005

